TECHNIQUES FOR TEACHING STUDENTS WITH HEARING IMPAIRMENT

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ABSTRACT

Communication is a very challenging task in the process of teaching students with hearing impairment. Effective teaching methods are essential in Diploma and Engineering education for teaching students with hearing impairment. The educational objective is to provide state-of-the-art education, excellent communication skills, inculcating professional ethics, and to make them employable. Thus the subject knowledge, as well as communication skills, are very important for students with hearing impairment to get employment in the industry and educational sector. The students learning outcome depends on the teaching-learning process. The role of the teaching and learning process plays a crucial role in enhancing the technical and communication skills of students with hearing impairment. This requires a set of effective teaching techniques that can be used for teaching students with hearing impairment. These include lip-reading, written communication, speech reading, visual presentation techniques, and total communication method of teaching. The present paper focuses on the various teaching techniques to be used to teach students with hearing impairment to increase their learning outcomes.

KEYWORDS: Communication, Hearing Impairment, Sign Language, Teaching Techniques & Vocabulary

INTRODUCTION

Hearing loss creates many problems and challenges in communication. Hard of hearing is a term used to cover the whole range of hearing loss. Research has shown that enrolment in an effective early intervention program is very important for a child's language models and communication skills. Lack or loss of hearing can affect students learning progress, particularly in the understanding and production of spoken language. The problem is still tougher at the higher education level. To improve the employability skills of students with hearing impairment, it is highly essential to make them strong both in subject knowledge and communication skills. They have been strong in written communication to get placements in industrial sectors. The students with hearing impairment should be able to explain things to normal people through written communication since written communication is the common mode of communication for both students with hearing impairment and hearing professionals.

Mainly three steps are involved in sign language recognition: pre-processing, feature extraction, and classification [1]. Since most classrooms today are multicultural and include learners with a variety of learning styles and needs, it is important to study the potential of interventions for universal design and application [2]. Students with hearing impairment are highly heterogeneous group who demonstrate varied levels of academic achievement and attainment [3]. Multimedia presentation of reading material is significantly more effective for reading comprehension than is the use of print only [4]. Vocabulary knowledge and speech-reading are important for children with hearing impairment reading development [5]. Sign language recognition is one of the most

growing fields of research area [6]. Mediated instruction play important role in visual literacy skills that enable students to learn how to process visual aids in a way that supports their reading comprehension [7]. The cultural approach to the education of students with hearing impairment views sign language as the most natural linguistic form of students with hearing impairment, and a powerful means of communication for all purposes and in all circumstances [8].

Hence the overall training and teaching of students with hearing impairment depend on the teaching methods adapted for teaching. Hence it is essential to use a bunch of effective teaching techniques for the overall academic development of students with hearing impairment.

Effective Teaching Techniques

The most common teaching techniques include the following :

- Written communication

- Visual presentation

- Sign language

- Lip-reading and

- Total communication

Written Communication

Written communication is the most common and effective communication mode for teaching students with hearing impairment. In this approach, the teacher writes course name, unit name, topic name, list of keywords, definitions, equations, diagrams, explanations, and derivations on the board. The written content is explained to the students with complete facial expressions. This approach would help students with hard of hearing to note down the important points of the lessons being taught and the same can be utilized for the revision process. The written communication may be one to many or one to one.

Visual Presentation

Visual communication is the most effective means of communication to communicate with students with hearing impairment. The visual presentation gives the pictorial view of the lecture being taught. Visual presentations include data of type text data, video, and animation. The visual presentation technique directly catches the attention of the students. The students will be more attentive to the visual presentation of lessons.

Visual presentation teaching may include PPT presentation, Charts, Video demonstration, Educational model display, practical demonstration of experiments with simulation and emulation tools.

Sign Language

Sign language is the language of students with hearing impairment. They can communicate with each other fluently with sign language. It is a language that has its own syntax and grammar. It helps students to clearly follow the lessons being taught. It is observed that if a teacher teaches using sign language the students participate actively interacting with enthusiasm. Sign language uses manual communication and body language to convey the meaning of the words delivered. Sign language involves simultaneously combining hand shapes, orientation, and movement of arm or body, and facial

expression to express a speaker's thoughts. A teacher should get involved himself to study, develop, and practice sign language for advanced latest technological topics and terms. Before delivering the actual content, a teacher should list out the keywords in that particular topic. Then the sign or the gesture pertaining to those keywords are prepared. The keyword is taught to the students with hearing impairment until they become familiar with those keywords. Now the actual content is delivered to the students. The students with hearing impairment are able to grasp the subject with better acceleration based on the knowledge procured through the keywords.

Lip Reading

Lip reading is nothing but speech reading. Lip-reading involves decoding the language of a speaker by paying close attention to the face and mouth without being able to hear the speaker's voice. Lip reading is not a simple task. It has got its own techniques and procedures. The speed of speaking (teacher) and accuracy of reading (student) plays a very important role. The teacher should speak with clarity and proper speed which could allow students with hearing impairment to decode the speech of the teacher. Research has shown that students with hearing impairment are better at lip-reading than hearing students due to their increased practice and heavier reliance on lip reading in order to understand speech.

Total Communication

The ultimate goal of any communication method for teaching students with hearing impairment is to increase the learning outcomes of the students. Total communication itself indicates that it is a combination of written communication, sign language, fingerspelling, spoken language, lip-reading, facial expressions, body language, visual presentation, etc. If we deliver a lecture by combining the features of all the above methods that would be an effective teaching method. We can name it total communication. So Total communication is the best method as it embeds existing available teaching techniques.

CONCLUSIONS

Teaching students with hearing impairment need creative thinking. To enhance the learning outcome of the students, a teacher has to teach the subject in such a way that a student with hearing impairment can understand it and also be able to analyze and articulate it. This needs a set of effective teaching methods to be used in creating interest among the students, and the course to be taught is a creative task for the teacher. So the teacher has to be very clear about the content of the course, course outcomes, assignments, and the teaching-learning process to be adapted to achieve the learning outcomes. The teaching-learning process plays a major role in achieving the desired attainment levels. The suggested teaching methods can be collectively used for teaching students with hearing impairment pursuing Diploma and Engineering education in the Computer Science domain and Electronics domain. In general, the suggested methods can be used to enhance the employability skill of students with hearing impairment pursuing a Diploma and Engineering education.

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